What is claimed is:

1. A chromatographic separation apparatus for separating components from a mixture of components in a fluid comprising

a plurality of individual separation modules in sequential fluid communication, each said separation module including a chemically active capture material,

at least one of said separation modules including means selectively operable to isolate said at least one separation module from any other separation module; and

said at least one said separation module including fluid inlet and fluid outlet means operable when said at least one separation module is isolated from any said other separation modules for allowing at least a portion of a component captured by said capture material of said at least one separation module to be removed from said at least one separation module without passing through any other separation module.

2. The chromatographic separation apparatus as defined in Claim 1 wherein the chemically active capture material of each said separation module has the same chemical activity.

3. The chromatographic separation apparatus as defined in Claim 1 wherein at least one of said separation modules includes a first chemically active capture material and at least one of said separation modules includes a second chemically active capture material, said first and second chemically active capture materials having different chemical activities.

4. The chromatographic separation apparatus as defined in Claim 1 wherein said capture material of at least one of said separation modules comprises a porous collection member having flow channels of about 50μ or greater.

5. The chromatographic separation apparatus as defined in Claim 4 wherein said separation module includes a plurality of said collection members.

6. The chromatographic separation apparatus as defined in Claim 1 wherein said capture material of at least one of said separation modules comprises particulate material.

7. The chromatographic separation apparatus as defined in Claim 6 wherein the particle size of said particulate material is about 100μ.

8. The chromatographic separation apparatus as defined in Claim 1 wherein at least one of said plurality of individual separation modules further includes a detection system for determining the location of a component in said module.

9. The chromatographic separation apparatus as defined in Claim 1 and further including a sample loading module.

10. The chromatographic separation apparatus as defined in Claim 1 wherein each of said separation modules has a fluid inlet and fluid outlet means for allowing a component captured by said capture material of each said separation module to be removed from said separation module without passing through any other said separation module.

11. A chromatographic separation process comprising passing a fluid containing a mixture of different components through a chromatographic separation apparatus as defined in Claim 1, whereby at least a portion of a component of said mixture is captured by the capture material of at least one separation module.

12. The chromatographic separation process as defined in Claim 11 wherein said fluid comprises a fermentation broth which includes components which are the products of recombinant DNA processes.

13. The chromatographic separation process as defined in Claim 11 wherein the chemically active capture material of each said separation module has the same chemical activity, whereby the capture material of each said separation module captures a portion of the same component of said mixture.

14. The chromatographic separation process as defined in Claim 11 wherein at least one of said separation modules has a first chemically active capture material and at least one of said separation modules has a second chemically active capture material, said first and second capture materials having different chemical activity, whereby said first capture material captures at least a portion of a first component in said mixture and said second capture material captures at least a portion of a second component of said mixture.

15. The chromatographic separation process as defined in Claim 11 wherein said capture material of at least one of said separation modules comprises a porous collection member having flow channels of about 50u or greater.

16. The chromatographic separation process as defined in Claim 15 wherein said separation module includes a plurality of said collection members.

17. The chromatographic separation process as defined in Claim 11 wherein said capture material of at least one of said separation modules comprises particulate material.

18. The chromatographic separation process as defined in Claim 17 wherein the particle size of said particulate material is about 100μ.

19. The chromatographic separation process as defined in Claim 11 wherein at least one of said plurality of individual separation modules further includes a detection system for determining the location of a component in said module.

20. The chromatographic separation process as defined in Claim 11 and further including removing the component captured by the capture material of at least one said separation module directly from said separation module without passing said component through any other said separation module.